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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/597,849

Applicant(s)

MARTIN, ADAM

Examiner

Michael Chao

Art Unit

2442

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☒ Claim(s) 4, 7, 8, 17, 20, 28, 41, 42, 46, 54, 56 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claims 4, 7, 8, 17, 20, 28, 41, 42, 46, 54, 56 are objected to because of the following informalities:

Claims 4, 7, 8 contain 'and/or'. Since the examiner is required to give the claims their broadest reasonable interpretation the alternative and/or must be read as exclusively 'or'. Appropriate correction is required.

Claim 17 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 17 recites "a terminal"; however, the terminal is not recited with any connection to the system of claim 1.

Claim 20 contains numerous typographical errors.

Claim 28 contains "tan".

Claims 41, 42, do not contain periods.

Claim 46 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. "Adapted to" yields the following limitations optional. See MPEP 2106 II(C).

Claims 54 and 56 contain the phrase "the use of a known". This language by itself implies non-patentability under 35 USC § 103.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 contains the limitation "a service comprising one or more processing tasks applicable to data not tied to the service". Data not tied to the service could be any data conceivable, and as such, does not particularly point out and distinctly claim the subject matter.

Claim 3 recites "linear communication chain" and "parallel linear algorithms", these limitations are not understood in reference to the subject matter claimed. By referencing applicants specification (page 16, line 27), Examiner has interpreted this limitation to mean "simultaneous load balancing calculations".

Claim 1 provides for the use of "A system architecture", in the phrase "in order to: . . ."; but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is

indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 6 provides for the use of "A system architecture", in the phrase "whereby memory requirements and computing requirements are minimi[z]ed, event computation time and reporting are substantially real time and latency is minimi[z]ed"; but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

The term "substantially" in claim 6 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claim 6 does not particularly point out and distinctly claim the subject matter.

Claim 12 contains the limitation "in which the network connection for connecting users is from the user to the user ambassador and is not accessible, " and "isfi-om"; Examiner cannot interpret the limitations these phrases are intended to describe. Also (modules), apparently redefines servers or server clusters, making them indefinite: since the reader cannot interpret which of these objects is actually recited by the claim.

Claim 13 contains the word "preferably" which does not positively recite a limitation, rather it describes a possibility. This leaves the claim ambiguous, such that a reader would not know what the claim is intended to cover.

Claim 15 recites the limitation "each user ambassador". There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 16, the phrase "such as" and "ect." render the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 17 recites "a terminal"; however, the terminal is not recited with any connection to the system of claim 1. This is indefinite because the reader would not know how this limitation impacts the invention.

Claim 20 is generally indefinite due to numerous typographical errors and misspellings.

Claim 27 contains the limitation "salable". The ability to sell a service is entirely removed from load balancing. While the "expert system may be envisioned to enable marketability of a service, the invention as claimed does not relate to the process salability in any way. Such a limitation is indefinite.

Regarding claim 32, the phrase "such as" and "ect." render the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 32 contains the limitation "in which assumptions are selected from a number of predetermined assumptions, such as shadow, line of sight, locality, terrain etc". Such limitations are not related to the structure or functionality of the preceding claims. It is therefore indefinite since the reader is left to guess how these spatial concepts reflect upon the load balancing apparatus claimed.

Claim 32 recites the limitation "line of sight, locality, terrain". There is insufficient antecedent basis for this limitation in the claim.

Claim 35 contains the limitation "whereby invalid messages may be detected and queried". Queried is a preparation to do an action, and no action for this query is recited.

Regarding claim 36, the phrase "ect." render the claim indefinite because it is unclear whether the limitations preceding the phrase are part of the claimed invention. See MPEP § 2173.05(d).

In claim 41, it is not understood how iterative dataset calculations could enhance linearity.

In claim 42, "coordinate" is not understood.

Regarding claim 43, the phrase "ect." render the claim indefinite because it is unclear whether the limitations preceding the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 54, the term "modified in a novel manner", without stating how it may be modified is indefinite since it does not detail what is intended to be claimed.

Claims 47-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claim 56 recites "The use of a known expert system". Expert system is not a term known in the prior art. As such, it can be construed broadly to be any system. If the applicant intends to reference information in the specification the proper way to do so is use the phrase "means for" or "steps for". See 35 U.S.C. 112.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-56 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites "A system architecture". It is unclear what a system architecture is intended to represent, as such it could be interpreted as a plan. Since a plan is not a system, this claim is none of a process, machine, manufacture, nor composition of matter; thus, non-statutory.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 6 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claims 48-51, 54, 55 are directed to non statutory subject matter. A "user interface", "datafile", "datalog", "dataset", "linear algorithm", are none of a process, machine, manufacture, or composition of matter. As such, they are non statutory.

Concerning claim 54, 55, an algorithm is not patentable. See Flook, 437 U.S. at 585, 198 USPQ at 195.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10, 13, 14, 24-28, 30-33, 41-44, 46-50, 52-56 are rejected under 35 U.S.C. 102(e) as being anticipated by Agarwal et al. (US 2003/0028642).

With respect to claim 1, Agarwal teaches; A system architecture for a massively multi user application requiring massive concurrent data transactions comprising in a modular networked system of servers and of network services :

a plurality of application servers providing execution of services based on data from multiple users, (see Agarwal Figure 2) a service comprising one or more processing tasks applicable to data not tied to the service;

one or more load balancing servers; ("Each Load Distributor" Agarwal paragraph [0094])

a network connection connecting application and load-balancing servers; and one or more load balancing expert systems having access to a register of servers (Agarwal paragraph [0109]) and a register of users, (Agarwal paragraph [0114]) operable to monitor application server load and division of services on individual application servers ("A Load Distributor 110 tracks the current set of instances to which the distributor distributes hits, for allocated capacities and present loads" Agarwal paragraph [0094]) and direct transfer of services between servers in order to: (i) facilitate and simplify calculations requiring data access and/or transfers; and (ii) to distribute server load to meet capacity of any given application server.

Regarding claim 2, Agarwal teaches; in which the load balancing expert system does not direct physical transmission of services as such but either clones the original and initiates the operation of the clone, (Agarwal paragraph [0099]) at the same time stopping the original (Agarwal paragraph [0185]) and subsequently deleting the original; (Agarwal paragraph [0101]) or services are preloaded on all servers before the start of an application, and the load balancing server directs the activation of a service on a new server, stopping the same service which was previously in operation on another server.

Regarding claim 3, Agarwal teaches; which provides a linear communication chain from user to server, reducing the load on servers, wherein linear communication is provided by services operating parallel linear algorithms. ("and aggregates at various levels for efficient decision-making" Agarwal paragraph [0154])

Regarding claim 4, Agarwal teaches; wherein the load balancing expert system is operable to distribute and dynamically re-distribute data and/or services among the application servers based on one or more of:

- (a) first information presenting a relative desirability of data for a service ;
- (b) second information representing a relative desirability of a service for an application server; and
- (c) third information representing a processing load and/or spare processing capacity of an application server. (Agarwal paragraph [0154])

Regarding claim 5, Agarwal teaches; also operable to monitor division of original data. (Agarwal paragraph [0115])

Regarding claim 6, Agarwal teaches; wherein requests are balanced amongst servers and expert systems and services running on the servers are themselves mobile, and move from server to server to accommodate changing usage patterns, (Agarwal paragraph [0099-103]) whereby memory requirements and computing requirements are minimised, event computation time and reporting are substantially real time and latency is minimised.

Regarding claim 7, Agarwal teaches; wherein pluralities of the application servers are associated together as modules, each module being reconfigured to provide higher priority and/or speed intra-module communication than inter-module communication. (Agarwal paragraph [0092])

Regarding claim 8, Agarwal teaches; system is configured to use

- (i) services within a single module; and/or
- (ii) data located within a single module. (Agarwal paragraph [0092])

Regarding claim 9, Agarwal teaches; in which functions are selected from the group consisting of:

- (a) the load balancing expert system migrates two interdependent event tasks or expert systems to the same server; ("One approach is to dedicate machines for particular resource classes." Agarwal paragraph [0043])
- (b) related data congregates together and services congregate with the data's final position, subject to allowable load on server and other heuristics in order to access the data; and (Agarwal paragraph [0044])
- (c) a service is moved from one server and split between two servers, in which case the service moves to both servers, and the applicable data in the form of different users, may be split between the two servers. (Agarwal paragraph [0044])

Regarding claim 10, Agarwal teaches; in which the load balancing expert system operates on a single server or a cluster of servers. (Agarwal paragraph [0043])

Regarding claim 13, Agarwal teaches; which additionally comprises one or more service expert systems operable to perform calculations relating to an event, preferably each service expert system comprises a plurality of services. (Agarwal paragraph [0085])

Regarding claim 14, Agarwal teaches; which additionally comprises one or more user solution definition or solution selection expert systems operable to apply at least one solution or select at least one solution. (Agarwal paragraph [0085])

Regarding claim 16, Agarwal teaches; in which an application is an application wherein a user operating a terminal joins an operation on a processor or server, such as a board game, gambling game, locating game or application, training game or system, teaching system, dating match application, introduction service application, sport management game, such as football or horse racing management, shooting game, battle game or virtual reality game etc. ("(interactive games such as chess, scientific computations such as weather forecasting, etc.). Agarwal paragraph [0028])

Regarding claim 17, Agarwal teaches; in which a terminal comprises a device or "platform" connected to a network and accessible to servers, such as a personal computer, console such as Playstation TM, hand held device, mobile phone and the like. ("receiving an incoming flow of requests from users to use an application" Agarwal claim 1)

Regarding claim 18, Agarwal teaches; in which a server may has one or more services running on it that question servers on their preferences and load, and question services on their preferences, a plurality of services needing to communicate, therefore comprising a plurality of load balancing expert systems; alternatively a single load balancing service is provided that queries all services and gets a summary of interrogation results. (Agarwal paragraph [0085])

Regarding claim 19, Agarwal teaches; in which the load balancing expert system receives an overload alert from an application server or its corresponding software server, initiating load balancing. (Agarwal paragraph [0087])

Regarding claim 20, Agarwal teaches; in which the load balancing expert system presents to each application server or software server a set of questions on relative desirability of any items in a list of event tasks (ie services) to be allocated and each server or software server grades these, (Agarwal paragraph [0110]) and modifies this grading with time; and also presents to each service a set of questions on the relative desirability of a particular server as host, (Agarwal paragraph [00114]) whereby services grade these on the basis of need for the data present on servers; and also questions every server or software server on its throughput and latency, receives replies and decides whether there is a need to reduce the load on any given server, looking at the list of responsibilities and using heuristics such as RAM and available CPU to sort by undesirability, selects one and offers it to a server or software server reporting high desirability or to a server or software server which is least heavily loaded. (Agarwal paragraph [0087])

Regarding claim 21, Agarwal teaches; which provides for integrated server clustering and handover by means of the one or more load balancing servers being apprised of individual and module server load at any one time and being competent to direct communication between servers, including not only communication of data but the transfer of data where this will speed up the interaction between server and data or where the need for data by the host server is less than that of the requesting server,

and also the transfer of expert systems and task responsibilities or services where these become more appropriate to another server or can be more efficiently operated from another server. (Agarwal paragraph [0092])

Regarding claim 22, Agarwal teaches; in which the load balancing expert system compiles server clusters or modules so that all expert system and data needs are local to a module and services needing the same data are local to a module, or modules are balanced in terms of RAM overload, CPU overload and other metrics. (Agarwal paragraph [0160])

Regarding claim 24, Agarwal teaches; in which Parallel linear-algorithm expert systems are operated (Agarwal paragraph [0094]) in a module cluster (Agarwal paragraph [0025]) whereby they are able to access common information and data and are therefore always operating on the same dataset, in the event of a change in application circumstances. (Agarwal paragraph [0108])

Regarding claim 25, Agarwal teaches; in which data is minimally duplicated throughout the system. (Agarwal paragraph [0108])

Regarding claim 26, Agarwal teaches; in which the load balancing expert system allows modules or systems operating parallel algorithms and requiring access to the same datasets to be assigned to the same server or server module whereby they are able to directly access the data without the need to make copies, and without the need for time and capacity consuming data requests or transfers requests. (Agarwal paragraph [0043])

Regarding claim 27, Agarwal teaches; in which the use of expert systems operating parallel algorithms ensures that the application is readily salable without system overload. (Agarwal paragraph [0165])

Regarding claim 28, Agarwal teaches; which provides a scalar allocation of competency, one server has competency for locating an event to a global accuracy and hands over to the next server which has a competency for locating to a regional accuracy, which in turn hands over to a server which is competent to local or pixel perfect accuracy. (Agarwal paragraphs [0069-71])

Regarding claim 30, Agarwal teaches; which provides dynamic algorithm selection, whereby an algorithm suited to the prevailing dynamics of the application is selected and applied, ("The gateway of the server farm routes incoming hits to distributors of individual front-end subfarms based on the customers identity" Agarwal paragraph [0092]) for a suitable period until such time that the application dynamics become unsuited to that algorithm and an alternative algorithm is selected. ("compute the changes in resource requirements" Agarwal paragraph [0162])

Regarding claim 31, Agarwal teaches; in which a solution selection expert system comprises a linear algorithm which performs an initial solution selection which determines the nature of an event and assesses the state of the application in play, makes a set of assumptions in order to assess the means by which users will be affected and selects a solution to limit the impact of the event to a reasonable number of users, whereby non affected users are not considered in the calculation of event message. (Agarwal paragraph [0093])

Regarding claim 32, Agarwal teaches; assumptions are selected from a number of predetermined assumptions, such as shadow, line of sight, locality, terrain etc, and linear algorithms which may be selected for dynamic solution selection in an application according to the present invention include line of sight, shadow, quadrant, scalar, range, grid, etc and additionally include any solution which is selective to a dataset which is identified in and recorded in the system architecture. (Agarwal paragraph [0046])

Regarding claim 33, Agarwal teaches; in which the load balancing expert system of the invention comprises data relating to the entire application and to subsets thereof and (Agarwal paragraph [0079]) monitors the prevailing solution efficiency; and on detecting a decrease in efficiency it automatically selects and directs a change in solution for any given server and any given service on any given server at any given time whereby one solution is replaced by the directed solution. (Agarwal paragraph [0162])

Regarding claim 41, Agarwal teaches; comprising expert systems for dataset generation using spare system capacity at any time, generating iterative dataset calculations relating to the prevailing application which may be applied to solution calculations further enhancing linearity, (Agarwal paragraph [0085])

Regarding claim 42, Agarwal teaches; comprising modular datasets representing the application whereby it is possible to update the application in respect of selected data only without the need to update an entire application dataset (Agarwal paragraphs [0156-158])

Regarding claim 43, Agarwal teaches; which comprises datasets relating to derivative maps only whereby update information does not need to be duplicated to a real map and whereby algorithms relating to the application can recognise all derivative maps universally by coordinate. (Agarwal paragraphs [0156-158])

Regarding claim 44, Agarwal teaches; in which servers include modular layers or levels hosting various systems and services as hereinbefore defined, levels being distinguished by networking, access, competency level, RAM access etc. (Agarwal paragraph [0030])

Regarding claim 46, Agarwal teaches; providing a system architecture as defined, comprising a plurality of application servers, and a load balancing expert system as defined, adapted to a generic application, or customised to a particular application. (Agarwal paragraph [0075])

Regarding claim 47, Agarwal teaches; A user terminal for networking to a massively multi-user application system architecture as hereinbefore defined in claim 1. (Agarwal paragraph [0024])

Regarding claim 48, Agarwal teaches; A user interface for interfacing to a massively multi-user application system architecture as hereinbefore defined in any of Claim 1. (Agarwal paragraph [0024])

Regarding claim 49, Agarwal teaches; A datafile for a massively multi-user application system architecture as hereinbefore defined in claim 1 selected from an event log, user data information, information map, derivative map and the like. (Agarwal paragraph [0108])

Regarding claim 50, Agarwal teaches; A datalog for a massively multi-user application system architecture as hereinbefore defined in claim 1 for classification of events by all features, given as snapshot or historical record. (Agarwal paragraph [0083])

Regarding claim 52, Agarwal teaches; A machine readable medium comprising system architecture software for a massively multi-user application as hereinbefore defined in Claim 1. (Agarwal paragraph [0024])

Regarding claim 53, Agarwal teaches; A method for controlling and directing the development of an application to be supported by the system architecture of Claim 1, with the use of the system architecture as a development means. (Agarwal paragraph [0056])

Regarding claim 54, Agarwal teaches; The use of a known or novel linear algorithm or known power algorithm modified in novel manner to a linear algorithm in the system of the invention as hereinbefore defined in Claim 1. (Agarwal paragraph [0165])

Regarding claim 55, Agarwal teaches; A novel linear algorithm for an expert system as hereinbefore defined in Claim 1, in particular for a solution as herein defined or illustrated in the examples. (Agarwal paragraph [0165])

Regarding claim 56, Agarwal teaches; The use of a known expert system in the system of the invention as hereinbefore defined in Claim 1.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 12, 15, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal, in view of Dattatri (US 6,658,453).

Regarding claim 11, Agarwal does not explicitly teach; which additionally comprises one or more user ambassador expert systems providing a confidential user interface, operable to transmit user requests and communicate results to individual users or user groups and operate on individual network protocols for each individual user. Dattatri teaches such functionality; "A client requests that the server perform some actions when a specific event occurs; and The server keeps track of the client's request and performs the actions when the event occurs." (Dattatri column 3 line 10) A person of ordinary skill in the art would have used the invention of Dattatri with the system of Agarwal by using the agents of Dattatri to report the changes of Agarwal's hosting system to a user. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the system of Dattatri with the system of Agarwal in order to allow users to receive system status updates.

Regarding claim 12, the combination discussed above teaches; in which the network connection for connecting users is from the user to the user ambassador and is not accessible, to any other part of the system and the network connection for transmitting event instructions to the system and receiving reports from the user

ambassador expert system to the servers or server clusters (modules). ("Access control is also enforced with respect to agent creation and agent deletion." Dattatri column 9 line 45)

Regarding claim 15, Agarwal does not explicitly teach; which additionally comprises one or more event expert systems operable to calculate events to determine users affected by each event and subsequently compute the effect thereon, forward an event message to each user ambassador of affected users and implement the event. Dattatri teaches such functionality; "This is really up to the client's imagination, because a client can write a Java/JavaScript program to do whatever they want" (Dattatri column 5 line 60) A person of ordinary skill in the art would have used the invention of Dattatri with the system of Agarwal by using the agents of Dattatri to report the changes of Agarwal's hosting system to a user. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the system of Dattatri with the system of Agarwal in order to allow users to receive system status updates.

Regarding claim 29, Agarwal teaches; in which each expert system in the system of the invention is developed around a key algorithm which is substantially linear having regard to the relation to events and users whereby an event may be related in a linear algorithm to a finite group of users (Agarwal paragraph [0217]). Agarwal does not teach; event messages may be reported to the same or a different finite group. Dattatri teaches such functionality; "Send a mail message to a specified user(s) with specified contents." (Dattatri column 5 line 64) A person of ordinary skill in the art would have used the invention of Dattatri with the system of Agarwal by using the agents of Dattatri

to report the changes of Agarwal's hosting system to a user. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the system of Dattatri with the system of Agarwal in order to allow users to receive system status updates.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal, in view of Eadline (US 5,471,622).

Regarding claim 23, Agarwal teaches; calculating an event (Agarwal paragraph [0098]). Agarwal may not teach; in which in the event that two solutions apply, these are dealt with in separate parallel algorithms, thereby maintaining linearity of communication. Eadline teaches such a limitation; "If parallel sub-queries have been identified in step 24, in step 26 a check is made to determine if other processors are available to accept sub-queries" (Eadline column 4 line 61). A person of ordinary skill in the art would have used the invention of Eadline with the invention of Agarwal by providing multiple processors for the servers of Agarwal that can offload processing requirements in the manner of Eadline. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the invention of Eadline with the invention of Agarwal to increase the processing efficiency of the system of Agarwal.

Claims 34-37, 39, 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal, in view of Fraenkel et al. (US 6,738,933).

Regarding claim 34, Agarwal does not teach; in which the modular system provides each user or group of users with an ambassador expert system operable for coordinating event messages from multiple events, coordinating related event messages from one event, such as sight and sound messages, and combining the modular event messages as a complete event message. Fraenkel teaches said limitations; "During the monitoring session, each agent computer executes its assigned transactions according to its assigned execution schedule, and generates performance data that indicates one or more characteristics of the transactional server's performance." (Fraenkel column 3 line 25). A person of ordinary skill in the art at the time of invention would have used the invention of Fraenkel with the invention of Agarwal by using the monitoring abilities of Fraenkel with the system of Agarwal. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the monitoring abilities of Fraenkel with Agarwal in order to detect problems that are dependent upon the attributes of typical end users (Fraenkel column 2 line 5).

Regarding claim 35, the combination discussed above teaches; in which the ambassador expert systems are intelligent, whereby they are associated with and are able to access memory banks and datasets relating to the user in question and assess whether an event message is feasible having regard to the user and his competence, ("a system administrator responsible for an Atlanta branch office may request to be notified when . . ." Fraenkel column 4 line 3) whereby invalid messages may be

detected ("e.g. poor response time versus erroneous server response" Fraenkel column 32 line 50) and queried.

Regarding claim 36, the combination discussed above teaches; in which the user ambassador expert system provides for user-user communication directly or via intervening respective ambassadors, wherein direct communication is in the form of chat rooms, auctions etc. ("cellular telephone" Fraenkel column 11 line 8)

Regarding claim 37, the combination discussed above may not explicitly teach; wherein the ambassador expert system provides for independent reporting to users, whereby servers do not have to wait for each other and reporting and implementing event messages is not held up in the case that event calculation for one or more users is borderline and thereby protracted. Fraenkel, however, provides such a teaching; "IT should be understood that a single computer could host two or more of the tool's components 32, 34, and 36" (Fraenkel column 7 line 67). A person of ordinary skill in the art at the time of invention would have used the invention of Fraenkel with the invention of Agarwal by using multiple instances of the monitoring abilities of Fraenkel with the system of Agarwal. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use multiple instances to allow the monitoring system to be redundant.

Regarding claim 39, the combination discussed above teaches; wherein a user ambassador service on dedicated servers enables both simultaneous reporting and provides an alternative mechanism for delivery guarantee. ("cellular telephone" Fraenkel column 11 line 8)

Regarding claim 51, Agarwal does not explicitly teach; A dataset of rules for a massively multi-user application system architecture as hereinbefore defined in Claim 1 by which the system determines precedence of conflicting event messages for a user. Fraenkel teaches such a limitation; "a system administrator responsible for an Atlanta branch office may request to be notified when . . ." (Fraenkel column 4 line 3). A person of ordinary skill in the art at the time of invention would have used the invention of Fraenkel with the invention of Agarwal by using the monitoring abilities of Fraenkel with the system of Agarwal. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the monitoring abilities of Fraenkel with Agarwal in order to detect problems that are dependent upon the attributes of typical end users (Fraenkel column 2 line 5).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination discussed above, in view of Aldarmi et al. (Time-Cognizant Value Functions for Scheduling Real-Time Systems).

Regarding claim 38, the combination discussed above teaches; additionally the ambassador expert system is operable on a priority ranking of events and users, whereby the ambassador provides a final judgement on event message in borderline cases. ("a system administrator responsible for an Atlanta branch office may request to be notified when . . ." Fraenkel column 4 line 3). The combination discussed above may not explicitly teach; wherein in the case of server overload or high server latency the server can drop borderline calculations. Aldarmi teaches such a limitation, in Figure 3

on page 8. Generally this section of Aldarmi discusses that a process may be given a processing time limit, after which its value to the system decreases and it is eventually aborted. This has the effect of dropping 'borderline calculations' since such calculations would be protracted and take up more time than some generic time allotment given to processes. Therefore the scheduling algorithm of Aldarmi would drop borderline calculations. A person of ordinary skill in the art would have used the algorithm of Aldarmi with the combination discussed above by using the metrics of Aldarmi to gauge a processes desirability to the system. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the algorithm of Aldarmi with the combination discussed above in order to remove conflicts over the system's resources.

Claims 34, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal, in view of Nakabayashi et al. (US 6,249,817).

Regarding claim 34, Agarwal does not explicitly teach; in which the modular system provides each user or group of users with an ambassador expert system operable for coordinating event messages from multiple events, coordinating related event messages from one event, such as sight and sound messages, and combining the modular event messages as a complete event message. Nakabayashi teaches such a limitation; URL in which the data to be monitored are stored, the date and time of latest check when the data-update monitor server 1000 checked an update of the data last time, a status representing the current state, the number of errors, and the date and

time of latest update" (Nakabayashi column 50 line 47). A person of ordinary skill in the art would have used the monitoring system of Nakabayashi with the invention of Agarwal by using the system of Nakabayashi to monitor the hosted services of Agarwal. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to combine the invention of Agarwal with the invention of Nakabayashi in order to enable the user to find a desired piece of data among a large number of logs. (Nakabayashi column 1 line 43)

Regarding claim 40, the combination discussed above does not explicitly teach; wherein the ambassador expert system comprises a complete local dataset record of the entire application as acknowledged received by the user, whereby any unsent messages can be detected, as a discrepancy with the application operation status at any time, whereby the ambassador simply sends the next message with the omitted message to update the user. Nakabayashi teaches such a limitation; "In the title updating operation for the discussion group, the communications host regards all the previously transmitted titles as read titles and does not re-transmit these read titles in response to the command for reading only unread titles. This effectively prevents the same title data from being written a plurality of times into the index file in the database 410. The newly transmitted and extracted title data are written after the existing title data in the index file. This procedure enables the up-to-date title data to be connected seamlessly to the existing title data." (Nakabayashi column 19 line 22). A person of ordinary skill would have used this data updating technique to update the status information of the combination discussed above by sending only the data that has not

been previously transmitted. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the invention of Nakabayashi with the combination discussed above in order to reduce the bandwidth required by the system.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable Agarwal, in view of Brownmiller et al. (US 5,778,184).

Regarding claim 45, the combination discussed above does not explicitly teach; which incorporates a neural network for pattern recognition. Brownmiller discloses a neural network for pattern recognition (Brownmiller column 10 line 59). A person of ordinary skill in the art would have used the invention of Brownmiller with Agarwal by using a neural network to trace pattern error activity. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the invention of Brownmiller with the invention of Agarwal in order to trace the source of errors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Chao whose telephone number is (571)270-5657. The examiner can normally be reached on 8-4 Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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